

REMARKS

Reconsideration and the timely allowance of the pending claims, in view of the following remarks, are respectfully requested.

In the Office Action dated March 21, 2006, the Examiner rejected claims 1-5, 8, and 10-26, under 35 U.S.C. §102(b), as allegedly being anticipated by Houston '173 (U.S. Patent No. 5,436,173); and rejected claims 1-5, 8-10, and 15-21, under 35 U.S.C. §103(a), as allegedly being unpatentable over Houston '173 in view of Geffken '498 (U.S. Patent No. 6,180,498).

By this Amendment, Applicants have amended independent claims 1 and 19 to provide a clearer presentation of the claimed subject matter. Applicants submit that no new matter has been introduced. As such, claims 1-19 continue to be presented for examination, of which claims 1 and 19 are independent.

Applicants respectfully traverse the prior art rejections, under 35 U.S.C. §102(b) and §103(a) for the following reasons.

I. Prior Art Rejections

As noted above, independent claim 1 now positively recites, *inter alia*, patterning the first surface of the first substrate with normal alignment markers and at least one reversed alignment marker that is a mirror image of the normal alignment markers. Claim 1 also positively recites forming at least one patterned layer on the second surface of the first substrate using a lithographic projection apparatus having an alignment system configured to align the second surface using the at least one reversed alignment marker(s) revealed by each of trench. These features are amply supported by the embodiments disclosed in the written description. (*See, e.g.*, Originally-filed Specification: par. [0048]- [0049]; FIG. 2).

In contrast to the Examiner's assertions, none of the asserted references teach or suggest each and every element of claim 1, including the features identified above. The

Examiner rejected claim 1, under 35 U.S.C. §102(b), as allegedly being anticipated by Houston '173. Applicants respectfully disagree.

The Houston '173 reference teaches that trenches 12 define mesas 18a, 18b, and 18c in surface 14 and may also define alignment marks in outer semiconductor layer 16 for use in later processing steps. (See, Houston '173: col. 3, lines 50-56). There is, however, absolutely nothing in Houston '173 that teaches, suggests, or otherwise infers the use of at least one reversed alignment marker that is a mirror image of the normal alignment markers, as required by claim 1.

Applicants submit that the remaining reference, Geffken '498, does nothing to cure the deficiencies identified above relative to claim 1.

For at least these reasons, Applicants submit that the none of the asserted references teach or suggest the claimed combination of elements recited by amended claim 1. Accordingly, Applicants submit that claim 1 is patentable and request the immediate withdrawal of the prior art rejections of claim 1. In addition, because claims 2-18 depend from claim 1, claims 2-18 are also patentable by virtue of dependency as well as for their additional recitations.

With regard to independent claim 19, this claim, as amended, now positively recites patterning the first surface of the first substrate with at least one first marker and at least one second marker in which the second marker has reverse attributes of the first marker. Claim 19 also positively recites locally etching said first substrate as far as the protective layer to reveal the at least one second marker by forming a trench around the at least one second marker. These features are amply supported by the embodiments disclosed in the Specification. (See, *e.g.*, Originally-filed Specification: par. [0053]; FIG. 8).

Unlike the present invention, none of the asserted references teach or suggest each and every element of claim 19, including the features identified above. First of all, for reasons discussed above regarding claim 1, neither Houston '173 nor Geffken '498

teach or suggest the use of at least one second marker having reverse attributes of the first marker.

Second, the Houston '173 reference discloses that exposed surface 32 of outer semiconductor layer 16 is etched back toward surface 14 until reaching isolation bodies 21a and 21b such that only the top planar surfaces of mesas 18a, 18b, 18c and isolation bodies 21a, 21b are exposed. (See, Houston '173: col. 4, lines 9-17; FIGs. 1d, 1e).

In so doing, there is nothing in Houston '173 that remotely teaches etching the first substrate as far as the protective layer *to reveal* the at least one reversed alignment marker *by forming a trench around* the at least one reversed alignment marker, as required by claim 1. Rather, as indicated above and depicted in FIG. 1e, the exposed top surfaces of mesas 18a, 18b, 18c and isolation bodies 21a, 21b are planar and do not, in any way, have a trench formed around them. Accordingly, the Houston '173 reference cannot anticipate claim 19.

Applicants submit that the remaining reference, Geffken '498, does nothing to cure the deficiencies identified above relative to claim 19.

For at least these reasons, Applicants submit that the none of the asserted references teach or suggest the claimed combination of elements recited by amended claim 19. Accordingly, Applicants submit that claim 19 is patentable and request the immediate withdrawal of the prior art rejections of claim 19. In addition, because claims 20-26 depends from claim 19, claims 20-26 are also patentable by virtue of dependency as well as for their additional recitations.

II. Conclusion.

All matters having been addressed and in view of the foregoing, Applicants respectfully request the entry of this Amendment, the Examiner's reconsideration of this application, and the immediate allowance of all pending claims.


Applicants' Counsel remains ready to assist the Examiner in any way to facilitate and expedite the prosecution of this matter. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the Undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number **033975**, under Order No. 081468-0306625.

The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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